REMARKS

Claims 68-88 are all the claims pending in the application.

In the last Office Action Claims 50-52, 58, 59, 63 and 67 were objected to because of informalities. Claims 48-67 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 48-67 were rejected under 35 U.S.C. § 102(b) as being anticipated by Arata et al. (JP 6-267098 A).

It is respectfully submitted that the rejection of Claims 48 to 67 is incorrect. It is respectfully submitted that the invention of Claim 48 was novel and not obvious. However, in order to more clearly distinguish the invention from the prior art, and to overcome the objections raised in pages 2 and 3 of the official letter under 35 U.S.C. 112, a new set of twenty-one claims, namely, Claims 68 to 88 are filed herewith, and it is respectfully submitted that the invention as claimed in the new Claim 68 is novel and not obvious, and furthermore, it is respectfully submitted that the new claims are consistent with U.S. Patent practice and conform with 35 U.S.C. 112.

The new Claim 68 includes the features of the original Claims 47 and 48 and some of the features of the original Claims 49 and 53.

Accordingly, new Claim 68 is directed towards a protective device for protecting an interface means of a read and/or write head of a read and/or write unit when the read and/or write unit is not in use. The protective device as claimed in Claim 68 comprises inter alia a carrier means for locating in a receiving area of the read and/or write unit, and a protecting means

carried on the carrier means for protecting the interface means against dirt and dust. The protecting means is of area and is located on the carrier means for engaging and embracing the interface means when the read and/or write head is in the inoperative position with the read and/or write unit deactivated so that the interface means nests in the protecting means for protecting the interface means from dirt and dust when the read and/or write unit is not in use.

It is respectfully submitted that none of the prior art specifications disclose a protective device for protecting an interface means of a read and/or write head, which includes the features of the protective device claimed in the new Claim 68. Furthermore, it is respectfully submitted that none of the prior art specifications suggest the provision of such a protective device, whether the prior art specifications are considered separately or combined. In particular, contrary to the Examiner's contention of the relevance of the disclosure of Arata in Japanese Specification No. 6-267098A, Arata fails to disclose or suggest a protective device for protecting any aspect of a read and/or write head of a read and/or write unit.

The disclosure of Arata is directed towards a modification to an optical read/write head of a read/write unit for facilitating cleaning of a lens of the optical head when a cleaning disc is loaded into a disc receiving area of the unit. The modification provides for the control of the vertical movement and the lateral tracking movement of the optical head so that the read/write unit can be operated in a cleaning mode for cleaning the lens. The vertical movement is controlled for bringing the lens into engagement with a felt cleaning pad on the cleaning disc,

and the lateral tracking movement is controlled for wiping the lens radially inwardly and outwardly across the cleaning pad.

A control circuit which includes the modification is illustrated in Fig. 2. Briefly, the vertical movement of the optical head which urges the optical head towards and away from a CD-ROM disc is controlled by a solenoid 15. The lateral tracking movement of the optical head is controlled by a solenoid 16. Controllers 31 and 32 control the power supply to the solenoids 15 and 16 for in turn controlling the movement of the optical head. In normal operation the controllers 31 and 32 are connected through a switch to control lines which provide signals for controlling the normal operation of the optical head. In Fig. 2 the switches to the controllers 31 and 32 are illustrated isolating the controllers 31 and 32 from these two control lines. The switch of the controller 31 is illustrated with the controller 31 connected to a DC source 25, and the switch of the controller 32 is illustrated with the controller 32 connected to an AC source 36. The switches, the DC source 25 and the AC source 36 constitute the modification to the read/write unit. The two switches are operated in the state of Fig. 2 for controlling the optical head in the cleaning mode.

In the cleaning mode, the cleaning disc, which is illustrated in Fig. 3 and indicated by the reference numeral 22, is loaded onto the disc drive 1 with a felt cleaning pad 21, which is located on the disc 22, directed downwardly towards the optical head 4. The objective of the arrangement of Arata is to clean the lens 11 of the optical head 4 without rotating the disc 22, since as stated by Arata, bringing the optical head 4 into engagement with a cleaning pad, brush

or the like on a rotating disc damages the delicate support structure for the optical head. Accordingly, when the disc is loaded into the read/write unit, a special command is entered into the read/write unit which toggles the switches of the control circuit of Fig. 2 into the state illustrated in Fig. 2. The DC supply 25 which is supplied to the controller 31 urges the optical head 4, and in turn, the lens 11 upwardly so that the lens 11 lightly engages the cleaning pad 21. The AC signal from the AC source 36 to the controller 32 causes the optical head 4, and in turn the lens 11, to move laterally with a radial tracking movement relative to the cleaning pad 21 for cleaning the lens. This radial tracking movement causes the lens 11 to move radially inwardly and outwardly across the cleaning pad 21 in cleaning engagement with the cleaning pad 21 for cleaning of the lens 11. When the cleaning operation has been completed, the switches to the controllers 31 and 32 are returned to the normal operating position, and the cleaning disc 22 is removed.

Accordingly, it is respectfully submitted that Arata discloses nothing more than a cleaning disc for cleaning a lens of an optical head of a read/write unit. The disc is of similar shape to a CD-ROM disc, and carries a felt cleaning pad 21. Arata entirely fails to disclose the provision of a protective device for protecting a lens or any other interface means of an optical head or any other read/write head of a read/write unit. Furthermore, there is no suggestion in the disclosure of Arata of the possibility of the cleaning disc 22 of Arata fulfilling any protective function when the read/write unit is not in use or otherwise. Indeed, quite the contrary is the case, since the cleaning pad 21 is located on the disc 22 of Arata at such a level that the

read/write head must first be moved vertically upwardly by the DC supply 25 in order to bring the lens into contact with the cleaning pad 21. Thus, even if the cleaning disc 22 of Arata were to have the cleaning pad 21 located in a position which corresponded to the inoperative position of the read/write head when the read/write unit is deactivated, clearly, it would be impossible for the cleaning pad 21 of Arata to engage and embrace the lens 11 of the read/write unit of Arata, since the read/write head must be moved vertically by the DC supply 25 in order to bring the lens 11 into engagement with the cleaning pad 21 for cleaning thereof. Furthermore, it is respectfully submitted that not only is the cleaning pad 21 located at a vertical level at which it could not be engaged by the lens of Arata when the read/write unit is deactivated, but it is clearly located at a radial position which is intermediate the inner and outer data tracks, and thus would be radially spaced apart from the lens when the read/write unit would be deactivated. Therefore it is respectfully submitted that under no circumstances could the cleaning disc of Arata be used to protect the lens of a read/write head of a read/write unit when the read/write unit is deactivated.

Accordingly, it is respectfully submitted that Arata fails to disclose or suggest a protective device for protecting a lens or other interface means of a read and/or write head of a read and/or write unit when the read and/or write head is in an inoperative position with the unit deactivated and not in use.

Accordingly, since Arata neither discloses nor suggests a protective device for protecting an interface means of a read and/or write head of a read and/or write unit when the unit is not in use, and furthermore, since none of the other prior art documents disclose or suggest such a

protective device with all the features of the new Claim 68, it is respectfully submitted that the new Claim 68 should be allowable and allowance is respectfully requested.

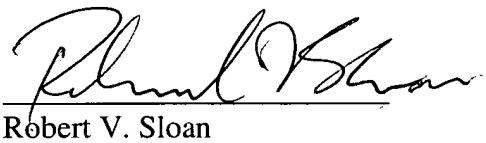
Since the new Claims 69 to 85 are dependent either directly or indirectly on the new Claim 68, it is respectfully submitted that once the Examiner is satisfied of the allowability of the new Claim 68, Claims 69 to 85 should likewise be allowable.

Claim 86 is directed towards a method for protecting an interface means of a read and/or write head of a read and/or write unit, and claims method steps which are substantially similar to the features claimed in the new Claim 68. Accordingly, it is respectfully submitted that once the Examiner is satisfied of the allowability of the new Claim 68, new Claim 86 should likewise be allowable and allowance is respectfully requested.

Since Claims 87 and 88 are dependent directly on the new Claim 86, it is respectfully submitted that once the Examiner is satisfied of the allowability of the new Claim 86, new Claims 87 and 88 should likewise be allowable, and allowance is respectfully requested.If for any reason the Examiner is unable to allow the application on the next Office Action and feels that an interview would be helpful to resolve any remaining issue, the Examiner is respectfully requested to contact the undersigned attorney for the purpose of arranging such an interview.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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